

### August Meeting

**Friday, August 20  
7:30 pm**

\*\*\*\*\*

**Ken Mintz**

**Our Savior's Lutheran Church  
1035 Carol Lane  
Lafayette, CA**

Ken Mintz, from SBC, will be talking about the future technology and services being developed by telecommunications companies. Telecomm is an amazing business and it should be an enlightening presentation.

## Presidential QRM

By Trevor Hall, WA6JAU

Welcome new vice president Joe Cusumano, KF6RGH

On August 2 the MDARC board approved the appointment of Joe Cusumano to the position of Vice President. Please give Joe all the support you can, and look forward to fascinating presentations at future meeting.

Unfortunately Robert Beard, KG6FPZ, had to resign. Thank you Bob for the many projects you have completed for the club in a timely manner. You will be missed, good luck and stay in touch.

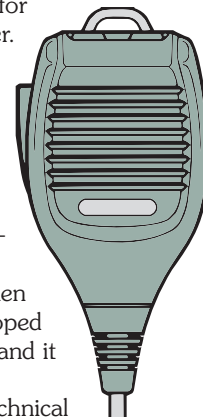
The recent picnic was a great success. Approximately thirty members attended, and there was plenty of food for all. Thanks again to Tracy Schwartz, KE6TOT, and George Rousch, WB6OFH, for another job well done. We also wish to thank Dave McIntyre, KG6ACD, for his support of the picnic. Thank you Howard Burk, KE6PTT, for running the transmitter hunt, and John Lytle, KD6ZMP. If you have any suggestions for next years picnic, please contact any club officer.

The speaker at the next general meeting is Ken Mintz from SBC. Ken will be talking about the future technology and services being developed by telecommunications companies. Telecomm is an amazing business and it should be an enlightening presentation.

If you want to increase your ham radio experience, attend the technical committee meeting. The meeting is held on the first Saturday of every month at the Pittsburg Environmental center behind Small World at 2551 Harbor Street. The meeting starts at 8:00am sharp. If you want more information please e-mail me at wa6jau@netzero.net.

PACIFICON is only two months away. Act fast and purchase your tickets either online at <http://www.pacificon.org> or attend the next general meeting on August 20<sup>th</sup>.

If you have the August issue of Diablo Magazine, look on page 28 and see if you recognize the club member. Thank you, KE6ZIW, for the great advertising of amateur radio.



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## Oregon Amateurs Aid in Ocean Rescue

(Aug 9, 2004)—Two members of the ARRL-affiliated Coos County Radio Club happened to be in the right place at the right time June 19 and were able to direct an emergency team to the correct site of a near-drowning. Ed Makaruk, KD7JFB, says he and Rick Livellara, KD7NTA, were walking along Bastendorff Beach when they monitored a call on the public service band that a rip tide had carried three youngsters out to sea. Looking up the beach, they were able to spot the scene. "A surfer was in the water, and we knew that the rescuers were being dispatched by a tourist who was giving them the wrong location," Makaruk said.

As Makaruk headed up the beach, Livellara ran to the parking where the surfer had taken the swimmers. "I watched them to make sure they were all right, then put an emergency call out on the 146.280 repeater," Makaruk said. Andy Hoyle, KD7VCQ, heard it and called 911. "Andy was on the phone with them as we were talking and relayed the right location and that the kids were all right," Makaruk said. "I stood and waved in the sheriff when he showed up, then got out of the way so the pros could do their thing. It happened so fast that I was amazed at how walking on the beach and playing with radios turned into a way to help out. How great it is to have a ear listening when you need it!"

Ham radio's role got a mention in *The World*, the local newspaper in Coos Bay, which identified the surfer-rescuer as Clint Wirebaugh. The three youngsters, ages 12, 12 and 14, were not seriously injured.



## Mt. Diablo Amateur Radio Club W6CX

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The *Carrier* is a monthly publication of the Mount Diablo Amateur Radio Club (MDARC). It is the policy of the editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio and of interest to MDARC members, and space is available.

All material must be submitted to the editor by the first day of the month of publication. Material is accepted on a first-in, first-out basis. Articles and other material may be submitted via Internet email to [carrier@gardnerclan.net](mailto:carrier@gardnerclan.net) or delivered to the editor at the address listed in the club roster. Material will be accepted in plain ASCII or rich text format (RTF). Material may also be submitted as hardcopy.

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The opinions expressed in the *Carrier* are solely those of the editor or other contributors and do not necessarily reflect the opinions of either the Board of Directors or membership of MDARC.

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## General Meeting Minutes

July 16, 2004

The meeting was called to order by president Trevor Hall, WA6JAU, at 7:30 p.m. The minutes of the previous meeting were approved.

**PACIFICON:** John Schulze, KR6CR, reminded the group that the convention will be held October 15, 16 and 17<sup>th</sup>. The swap meet has been moved to Sunday to relieve the parking on Saturday. He has brochures available. Kay Craigie, N3KM, V.P. ARRL, will be the banquet speaker and Randall Larson will be the breakfast keynote speaker.

**Field Day:** Lauren Styles, WA6CIE, reported a low turnout for the event but that we did well in some bonus points for satellite, digital, press coverage, etc. He regretted that he had to leave with the Salvation Army Canteen on Friday night but any apology was soundly rejected by the members. The Canteen was needed for crews fighting a huge fire in Martinez near the home of MDARC members Kurt and Tracey Schwartz. Lauren said the Field Day site might be changed next year and commented on several possible sites.

**Tech Report:** The new tower for the trailer will be installed Friday, July 23<sup>rd</sup>.

**New Hams:** Trevor introduced new hams who are also new members: Richard Bernard, Janice Fujii, and Jeff Riedmiller.

**Public Service:** John Stuart, KM6QX, described an interesting twelve hour event for the next day that involved running, kayaking, and off road bicycling.

**Picnic:** George Roush, WB6OFH, gave a rundown on tomorrow's picnic. He then said that, after many years of serving, he was resigning as chair of the picnic and holiday party. He will continue to be active in the club.

**Speaker:** Trevor Hall gave a timely and interesting talk on IRLP and Echo-Link that was illustrated with computer projections and included a contact with a station in Hawaii.

**Prize:** This month's radio was won by a happy Don Williams, KG6SYQ.

**Adjourned:** The meeting was adjourned about 9:15 p.m.

Dick Schulze, AA6DL, Secretary

## Board Meeting Minutes

July 12, 2004

The meeting of the board of directors of MDARC, held on July 12, 2004, at Baker's Square Restaurant in Concord, was called to order by president Trevor Hall, WA6JAU, at 7:30 p.m. The minutes of the June 7, 2004 meeting were approved.

**Board Members Present:** Dick Brown, KT6X, Howard Burk, KE6PTT, Jay Caldis, KT6Y, Trevor Hall, Terry Matzkin, KE6WRE, and Dick Schulze, AA6DL.

**Other Members and Guests:** Dave Gordon, N6SWE, John Pascale, NN6E, and George Roush, WB6OFH.

**Resignation:** Trevor announced that, for personal reasons, Bob Beard had resigned as vice president. The board expressed regret over losing a valuable member.

**Field Day:** John Pascale reported that while participation was down we may have done all right on points, particularly on bonus points. John felt that a change of location might increase participation and suggested the Martinez Marina as a possibility. He had a proposed budget for that location that included rental of a tent and portable toilets for a net cost of some \$830. He is willing to chair the event next year and will continue to investigate this and other locations.

**Picnic:** George reported only ten persons have signed up for the picnic on Saturday, July 17<sup>th</sup>. After discussion on enhancing this and future picnics and whether to cancel due to low reservations, the board, on motion of Dick Brown, voted to hold the picnic as scheduled.

**Trailer Tower:** The tower is ready for pickup at Force 12. Howard will contact Keith Lattin regarding the pickup and installation.

**Repeaters:** Howard has been playing Newsline after the nets and will expand to other times.

**Telephone number:** Trevor said the old number will not appear in the Yellow Pages if we cancel by February 2005. We will leave it in service through PACIFICON.

**Club Brochure:** We need a new chair.

**SARA Repeater Linking:** John Pascale, who is also a member of Stanislaus Amateur Radio Association, said they would be interested in linking their Mt. Oso 2M repeater to ours for their Thursday Satellite Net and Friday Space Net. The board indicated an interest in the proposal but wants further information and also input from the Tech Committee.

**Technical Committee:** Howard reported the installation of the voting receivers is waiting coax for Volmer Peak.

**Adjourned:** The meeting adjourned at 9:00 p.m.

Dick Schulze, Secretary

## North Carolina Utility Ending BPL Field Trial

NEWINGTON, CT, Aug 6, 2004—Progress Energy Corporation (PEC) says it's completed Phase II of its broadband over power line (BPL) field trial in the Raleigh, North Carolina, area. In an August 4 PEC internal memorandum made available to ARRL, the company said its program to "test the viability of providing broadband service to communities it serves" will wrap up by the end of August, although PEC still plans to explore "several key strategic issues" regarding BPL through the end of this year. The company reportedly will shut down the system once it's able to move its BPL customers to other broadband providers.

"Currently, the company does not have plans for a large-scale commercial rollout of BPL in the company's service territories," the memorandum states. Progress Energy's decision comes on the heels of announced shutdowns of BPL field trials in Penn Yan, New York, and Cedar Rapids, Iowa.

PEC Vice President of Energy Delivery Solutions Lisa Myers said the utility obtained significant information about the design, construction and operation of a BPL system. "Overall, this has been a successful test for us," the memorandum quotes her as saying. "We have gathered valuable information about broadband over power lines and its potential." During its six-month Phase I and Phase II tests, the utility says it offered broadband service to more than 400 homes in southern Wake County. Earlier this year, FCC Chairman Michael Powell visited the BPL field trial to promote the technology, and local radio amateurs spoke briefly with him about their interference concerns (see "North Carolina Hams Experience Close BPL Encounter with FCC Chairman").

The PEC memorandum acknowledged Amateur Radio interference complaints. "BPL has met with vocal opposition from amateur or 'ham' radio operators who are concerned that the service will interfere with the radio frequencies they use," it said. "Some complaints were filed with the Federal Communications Commission (FCC) during Phase II by ham radio operators using mobile equipment in search of BPL signals."

Responding to one complaint, the FCC earlier this summer took measurements in the field trial area, and FCC Office of Engineering and Technology (OET) Deputy Chief Bruce A. Franca said the FCC had concluded that PEC's BPL trial "is in compliance" with FCC rules and that the company's ham band notching efforts "are effective" to avoid the potential for harmful interference. The ARRL has requested clarification of certain claims made in Franca's July 22 letter, however (see "ARRL Seeks Clarification of FCC Response to BPL Interference Complaint"). The memorandum cites PEC Director of Emerg-

ing Technologies Matt Oja as saying the utility conducted its BPL trial "strictly in accordance with existing FCC limits and measurement procedures." Oja said the technology PEC selected—by Amperion—"allowed us to address all complaints by changing the settings to mitigate interference."

One of the amateurs who's been closely monitoring Progress Energy's foray into BPL—Gary Pearce, KN4AQ—says he's pleased with the utility's decision. "It's a positive thing for ham radio that Progress Energy is not going to be pursuing BPL for whatever reason they decided not to do it," Pearce told ARRL. "It's going to make a lot of hams in Eastern North Carolina happy."

Despite the apparent "clean bill of health" from the FCC, Pearce says he believes the specter of interference loomed large in PEC's decision to not deploy a full-blown BPL system at this point. "We kept pointing out to them that things probably would be much worse if they deployed in a large area," he said. "Maybe that's what they saw. It's hard to tell—they're really not saying."

Pearce acknowledged that Progress Energy and Amperion personnel worked closely with local amateurs to notch out interference on HF amateur frequencies. Effective notching turned out to be more difficult than anticipated, however. Even following the FCC's visit to take measurements, amateurs continued to report strong BPL interference on the high end of 20 meters as well as in the HF international broadcast bands.

FCC measurements indicated notch depths averaging 24 dB below Part 15 emission limits, which Franca characterized as "sufficient to eliminate any signals that would be deemed capable of causing harmful interference, including interference to amateur operations." ARRL CEO David Sumner, K1ZZ, asserted in response that Part 15 device operators "must eliminate all harmful interference, and therefore in some cases must achieve more—in certain cases, considerably more—than a 24 dB reduction in order to be in compliance."

A news report on Progress Energy's BPL decision appeared in the August 6 editions of the Raleigh News & Observer.

## K7RA Solar Update

SEATTLE, WA, Aug 6, 2004—Average daily sunspot and solar flux numbers dropped dramatically from last week to this week. Average daily sunspot numbers were nearly 56 points lower at 42.4, and average solar flux was down more than 53 points at 88. Now that we're in August, we can look at July's numbers compared to previous months.

Over the past year, October 2003 had the highest monthly average of sunspot and solar flux numbers. Relative to the solar cycle decline, the July 2004 numbers were really quite high—no doubt due to the large number of sunspots over a two week period ending around July 26. In fact, the numbers for July were higher than for any period since October-November of last year.

The monthly averages of daily sunspot numbers from August 2003 through July 2004 were 114.3, 82.6, 118.9, 103, 75.7, 62.3, 75.6, 81, 59.3, 77.3, 77 and 87.8. The monthly averages of solar flux for the same period were 122.1, 112.2, 155.5, 140.8, 116.1, 114.1, 107, 112.1, 101.2, 99.8, 97.4 and 119.8.

Geomagnetic conditions have been nice and quiet over the past week, with the A index in the low single digits and periods when the K index was zero at all latitudes. Over this weekend,

we could see a rise in geomagnetic activity to unsettled levels. The predicted planetary A index for August 6-10 is 8, 15, 15, 15 and 8.

Solar flux is expected to remain under 100 over the August 7-8 weekend but slowly rise to a predicted peak of around 120 August 14-19. An increase in activity after August 12 is expected because of the return of Sunspot 652, which came into view July 17 during its last transit across the sun and disappeared after July 29. It was squarely facing Earth July 23—just after the peak in sunspot and solar flux numbers for the month.

Sunspot numbers for July 29 through August 4 were 32, 33, 39, 40, 39, 52 and 62, with a mean of 42.4. The 10.7 cm flux was 99.7, 88.7, 86.4, 83.4, 84.5, 87.6 and 85.4, with a mean of 88. Estimated planetary A indices were 9, 7, 9, 8, 8, 5 and 4, with a mean of 7.1. Estimated mid-latitude A indices were 6, 7, 7, 9, 5, 2 and 2, with a mean of 5.4.

## New Vanity Fee

NEWINGTON, CT, Aug 6, 2004—FCC personnel have clarified that the new Amateur Radio vanity call sign regulatory fee of \$20.80 for the 10-year license term actually becomes effective Tuesday, August 10, not Friday, August 6 as ARRL and others had announced based on information in The Federal Register.

A staff member at the FCC's Gettysburg office told ARRL that the Commission's computer system has been programmed to accept the new fee starting August 10. A management-level staffer in the FCC's Office of Managing Director explained that the Commission was not necessarily bound by the August 6 effective date The Federal Register indicates, which was 30 days after publication of the order containing the new fee schedule.

Applicants for amateur vanity call signs will continue to pay the \$16.30 fee per vanity call sign application until the new fee goes into effect. All applications received at the FCC on or after Tuesday, August 10 must be accompanied by the new, higher fee.

## New Amateur Satellite Project

MSAT-UK Chairman Martin Sweeting, G3YJO, has announced that an Amateur Radio transponder will be part of the European Space Agency's (ESA) Student Space Exploration and Technology Initiative (SSETI) "Express" satellite. Onboard will be a 2.4 GHz transmitter and a 437 MHz receiver. The pair will be turned into an amateur FM voice transponder after the transmitter serves initial telemetry duty.

"These frequencies will enable the many amateurs who already have AMSAT OSCAR 40 equipment to use it in an exciting new way," Sweeting said. Sweeting told participants at the 2004 AMSAT-UK Colloquium July 30-August 1 that AMSAT-UK has arranged with the ESA to provide—at very short notice—an S band transmitter for the SSETI Express. The 2.4 GHz transmitter will become the downlink of the single-channel FM U/S transponder. Holger Eckart, DF2FQ, will provide the UHF receiver.

An AMSAT-UK team is developing the 2.4 GHz downlink exciter, switching-mode power supply and control interfaces. A 3 W 2.4 GHz power amplifier—identical to the one flying in the recently launched AO-51 "Echo" spacecraft—already has been completed. The S band antennas consist of three flat-plate patches, engineered and produced by Wroclaw University of

Technology in Poland.

The SSETI Express is believed to be the first-ever pan-European student satellite with more than 100 students and their teachers at several European universities working on the project. The 2.4 GHz downlink transmitter will send satellite telemetry and data at 38.4 kb/s before being switched over to voice transponder operation once onboard experiments have been completed.

Spacecraft integration is due to start this month at the ESTEC laboratories in the Netherlands. Plans call for launching the 80 kg spacecraft into a 680 km sun-synchronous orbit next April from Plestek, Russia.

## Ramblings from the Editor

By Jerry Gardner, W6UV

Tired of reading rehashed ARRL bulletins and other news in the *Carrier*? I'm certainly tired of having to scramble every month looking for filler material to fill all that empty space.

As members of a club the size of MDARC, you should be contributing much more to your newsletter than you currently do. So put down your mics and stop yacking on the repeaters long enough to write something your fellow members might find useful and enlightening.

Otherwise I'll have to start running even more boring stuff on BPL. Heck, I might even resort to writing an editorial describing why I think *BPL* is a good idea.



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Net Control: KG6MDW

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145.680 Simplex

Jim Brunk, N6BHX

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**Low Pricing!**

## CALENDAR OF EVENTS

August 2	7:30 pm	MDARC Board Meeting	Carl's Jr. 2280 Oakgrove, Walnut Creek
August 20	7:30 pm	MDARC General Meeting	Our Savior's Lutheran Church
August 31		September <i>Carrier</i> Deadline	
September 6	7:30 pm	MDARC Board Meeting	Baker's Square Willow Pass, Concord

**The Carrier**  
**Newsletter of the Mt. Diablo Amateur Radio Club**  
**P.O. Box 23222**  
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***MDARC Meeting: August 20***